Claims

1. A memory-programmable control (SPS) for coupling to a data interface (8) of a personal computer (PC), having means for operating the inputs and outputs (9, 10) of the SPS, the means including keys for tripping machine functions,

characterized in that

- the keys (T1 through Tn) are embodied as pushbuttons (T1 through Tn) which are provided in addition to the conventional user surface (13) of the PC and which are each electrically connected directly to one of the SPS inputs (9);

- from the conventional user surface (13) of the PC, one of a plurality of key levels, each with selected meanings, stored in memory in the PC, for the pushbuttons (T1 through Tn) is selectable;

- and in the SPS, a data-processing control unit (4), connected to the SPS inputs (9), is provided, which from the PC via the data interface (8) receives the information about the key allocation of the pushbuttons (T1 through Tn) in the particular key level selected and links this information with a pushbutton signal applied to an SPS input (9).

2. The device as defined by claim 1,

characterized in that the pushbuttons (T1 through Tn) are each connected, parallel to the SPS inputs (9), to an internal bus (14) of the PC, so that by means of a respective pushbutton (T1 through Tn), surface functions (5) of the PC that are stored in memory in the PC and are simultaneously assigned to machine functions and to the key allocation can each be tripped.

3. The device as defined by claim 2,

characterized in that in the PC, a data-processing first control unit (3), connected to the pushbuttons (T1 through Tn) via the internal bus (14), is provided, which receives the information about the surface functions (5) assigned to the pushbuttons (T1 through Tn) and links it with a pushbutton signal, applied to the internal bus (14), to make a starting signal for the surface functions (5) assigned to that pushbutton (T1 through Tn).

4. The device as defined by one of claims 1 through 3,

characterized in that in the PC, a data-processing second control unit (6) is provided, which is connected to a screen (12) of the PC and which receives the information about a key label (17), corresponding to the key allocation, so that the key allocation of the particular key level selected can be displayed on the screen (12) of the PC by means of a key label (17).

5. The device as defined by claim 4,

characterized in that the second PC control unit (6) receives status information about the pushbuttons (T1 through Tn) from the SPS control unit (4) via the data interface (8); and that the visual display of the key label (17) of the individual pushbuttons (T1 through Tn) is dependent on the status information about the individual pushbuttons (T1 through Tn).

6. The device as defined by claim 4 or 5,

characterized in that the pushbuttons (T1 through Tn) are located in the vicinity of the screen (12) of the PC in such a way that a direct relationship with the key label (17) and/or pushbutton status information on the screen (12) can be established by the user of the device.

7. The device as defined by one of claims 4 through 6,

characterized in that the software in the PC is embodied such that the key label (17) can be displayed in reserved areas of the screen (12) that are not coverable by other display functions.

8. The device as defined by one of claims 1 through 7,

characterized in that in the PC, a central memory unit (1) is provided, in which for each selectable key level one data matrix (15) is stored, in which matrix each of the pushbuttons (T1 through Tn) is assigned a data line containing information that is allocated in columns to different purposes.

9. The device as defined by claim 8,

characterized in that in the PC, a central control element for level control (2) is provided, which acts as a data shunt between the central memory unit (1), the first

PC control unit embodied as a function assignment (3), the second PC control unit embodied as a key display (6), and the SPS control unit embodied as a flag assignment (4).

10. The device as defined by claim 9,
characterized in that
- in the data matrix (15), each pushbutton (T1 through Tn) has one SPS function flag, corresponding to the allocation of the pushbutton (T1 through Tn) in the selected key level, one SPS feedback flag, one piece of label information, and one PC function identification, assigned to the allocation of the pushbutton (T1 through Tn), of the surface function (5);
- and the first PC control unit for function assignment (3) receives the information on PC function identification, the second PC control unit for key display (6) receives the information on labeling, and the SPS control unit for flag assignment (4) receives the information on SPS function flags and SPS feedback flags via the control element level control (2) from the central memory unit (1).